

### **REMARKS**

The final Office Action dated April 06, 2004 has been reviewed, and the comments in the final Office Action have been considered. Claims 12, 13 and 16-19 were previously canceled without prejudice or disclaimer, and claim 63 has been added to particularly point out and distinctly claim the subject matter according to the present application. Claims 1-11, 14, 15 and 20-63 are pending, with claims 55-61 having been withdrawn pursuant to a restriction requirement issued on August 27, 2002. Accordingly, claims 1-11, 14, 15, 20-54, 62 and 63 submitted for consideration in connection with the Request for Continued Examination filed concurrently herewith.

Applicants submit that the pending claims are patentable over the prior art of record for the reasons set forth below and in view of the Declaration of Michael A. Fischer and the accompanying exhibits filed with the Request for Reconsideration of October 6, 2004. Applicants request consideration of the Declaration in accordance with MPEP § 716, and in particular MPEP § 716.01. Section 716.01 states that “[e]vidence traversing rejections... must be considered by the examiner whenever present.” Moreover, where the evidence is considered insufficient to overcome the rejection, “the examiner must specifically explain why the evidence is insufficient” and “[g]eneral statements such as ‘the declaration lacks technical validity’ or ‘the evidence is not commensurate with the scope of the claims’ without an explanation supporting such findings are insufficient.” Instead of complying with the requirements of MPEP § 716.01, the final Office Action makes only the general statement that “[t]he declaration of Michael A. Fischer is not convincing.” Consideration of the declaration is respectfully requested.

Claims 1-11, 14, 15, 20-54, and 62 stand rejected under 35 U.S.C. § 103 as being unpatentable over Fischer in view of Tramm. Applicants respectfully traverse the rejection of these claims as being obvious because there is no motivation or suggestion to modify Fischer in view of Tramm. Nor does Fischer in view of Tramm teach or suggest the claimed functional characteristics when the claimed sidewall sprinkler is paired with an identical sprinkler. And Fischer in view of Tramm also fails to teach or suggest specified features of the claimed sprinkler’s deflector.

Fischer shows and describes a specific sidewall sprinkler that utilizes a specially designed deflector with a canopy facing away from the outlet of the sprinkler body. The canopy has a

curved portion at its outer edge designed to target a flow of water in a specified manner. Fischer fails, however, to indicate the particular K-factors of this sprinkler and the operative characteristics of this sprinkler when paired with an identical sprinkler in the manner as recited in the claims. Commercialized embodiments of the sprinkler shown and described by Fischer do not have a K-factor greater than 9 and do not provide for the functional requirements of the claimed sprinkler. *See* Declaration of M. Fischer, filed October 6, 2004, at paragraphs 19 and 22.

The Office Action attempts to modify Fischer based on the sprinkler shown and described by Tramm to provide for the claimed sidewall sprinkler with a K-factor greater than 9. Tramm does not provide the teaching and suggestion to modify Fischer as asserted by the Examiner. While Tramm states that a sidewall sprinkler with a K-factor greater than 9 could be constructed in accordance with his description, it is believed that no such sprinkler has ever been built, and Tramm requires such sprinkler utilizes a specially designed deflector that has a canopy facing towards the outlet of the sprinkler body, in an opposite the direction of the canopy of Fischer. *See* Declaration of M. Fischer, filed October 6, 2004, at paragraph 29.

Because Tramm teaches particular features of a deflector in Tramm that must be employed in order to utilize K-factors greater than 9 in a sidewall sprinkler, it is improper to selectively pick only the K-factors from Tramm to modify Fischer and ignore Tramm's deflector orientation to hypothesize a sidewall sprinkler with a K-factor greater than 9 in an attempt to reach the claimed invention. MPEP § 2143.01, states that "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." Due to the opposite orientation of the canopy of Fischer and the canopy of the deflector of Tramm and the body of their respective sidewall sprinklers, the proposed combination of references by the Examiner is merely improper picking and choosing of disparate features in various references in an attempt to achieve the claimed invention as a whole. Absent the benefit of applicants' disclosure, there is no motivation or suggestion to pick only the K-factor from Tramm and incorporate such change in Fischer in an attempt to provide for the claimed invention as a whole.

Moreover, Tramm also fails teach or suggest how one of ordinary skill in the art, at the time the invention was made, would have modified Fischer to achieve the functional

requirements of the claimed sidewall sprinkler. Appreciating this deficiency in the hypothesized sprinkler of the proposed combination of Fischer in view of Tramm, the Examiner concludes that the claimed functional characteristics of the claimed sidewall sprinkler are inherent in the hypothesized sprinkler, and that the coverage area for the hypothesized sprinkler would have been achieved, at the time the invention was made, by routine skill of an ordinary artisan in the art. Applicants respectfully assert that such conclusions are not well-founded, and that Fischer, Tramm or the prior art of record do not teach or suggest the claimed invention as a whole.

Applicants assert that, at the time of the invention, one of ordinary skill in the art would not have been taught by Tramm how to modify Fischer to provide the sprinkler hypothesized by the Examiner in an attempt to reach the claimed invention as a whole. Contrary to the Examiner's assertion that Tramm provided an adequate teaching and suggestion to modify the sprinkler of Fischer to provide a hypothesized sprinkler having the claimed functional characteristics of the claimed sidewall sprinkler over a particular coverage area, Michael Fischer (the inventor of the sprinkler shown and described in the Fischer patent and a person of greater than ordinary skill in the art) states that he "[w]ould not know, based on the teachings ... how to ...obtain the sidewall sprinkler as claimed in the instant application." See Declaration of M. Fischer, filed October 6, 2004, at paragraph 33. Mr. Fischer further states that the Tramm patent would not have suggested to him, the inventor of the sprinkler shown and described in the Fischer patent, at the time the instant invention was made, how the sprinkler shown and described in the Fischer patent "[c]ould be modified by Tramm's ... to provide for a sidewall sprinkler that would provide an average density of 0.15 gallons per minute per square feet ..." over a specified collection area recited in the claims. *Id.* Consequently, a person of ordinary skill would not have been suggested or motivated to modify the sprinkler shown and described in the Fischer patent by the Tramm patent to reach the claimed invention as a whole. The Fischer and Tramm patents, therefore, fail to teach or suggest either implicitly, explicitly, or inherently the features recited in the claimed invention as a whole. Accordingly, all of the pending claims are patentable over the Fischer patent in view of the Tramm patent.

Furthermore, the Office Action fails to address particular features of the claimed sidewall sprinkler recited in claims 1, 20, 24, 25, 42, 45-48, and 50. In particular, applicants respectfully assert that Fischer in view of Tramm fails to teach or suggest the following features: (1) a

forward facing canopy of a deflector, as recited in claims 1, 20, 42, 45 and 63; (2) a generally flat canopy surface for a deflector, as recited in claims 24, 25, 46 and 50; and (3) a deflector that has only a single flow opening, as recited in claims 24, 47 and 48.

First, Fischer specifically orients a confining element 62 (serving as a canopy for Fischer's deflector plate 38) away from the outlet of the sprinkler, i.e., a forward facing orientation of the canopy, as recited in claims 1, 20, 42, and 45. Fischer orients the canopy in this manner so that a channel 90 on the confining element 62 is able to deliver a desired water density towards a center of a room. *See Fischer* at column 4, lines 47-55. Tramm, on the other hand, orients his deflector 22 so that its leading edge segments 50, 51 are oriented back toward the outlet of Tramm's sprinkler so that this deflector provides a "rearward spray pattern" for the K-factors described in Tramm. *See Tramm* at column 8, lines 7-12. Assuming, *arguendo*, that one of ordinary skill were to modify Fischer in view of Tramm, such person, looking to Tramm, would realize that the K-factor provided by the sprinkler body of Tramm with Tramm's specially designed rearward-oriented deflector for such body, would be necessary in any modification of another sprinkler to utilize the K-factors shown and described by Tramm. A modification of Fischer with the K-factor provided by the sprinkler body of Tramm and Tramm's rearward-oriented deflector, however, could render Fischer unsuitable in delivering water towards the far side of a coverage area as specifically required by Fischer. *See Fischer* at column 4, lines 47-55. As noted at MPEP §2143.01, "[i]f the proposed modification would render the prior art invention unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." Accordingly, claims 1, 20, 42, and 45 are patentable over Fischer in view of Tramm for at least this reason.

Second, the deflector plate 38 of Fischer utilizes the tendency of water to attach itself to a specially curved surface, i.e., a "Coanda effect" generated by a compound-curved channel 90 to lift the flow of fire-retardant fluid upward above the remainder of the fluid stream. *See Fischer* at column 4, lines 24-32. Fischer confirmed that, without this curved channel 90, the sprinkler of Fischer failed to provide for the desired improvement in spray pattern coverage. *See Fischer* at column 4, lines 33-37. Consequently, one of ordinary skill in the art would not have modified, at the time the invention was made, the compound curved channel 90 of Fischer's deflector into a

generally flat surface, as recited in claims 24, 25, 46, and 50. Accordingly, claims 24, 25, 46, and 50 are patentable over Fischer in view of Tramm for at least this reason.

Third, Fischer and Tramm provide, respectively, for a face portion that has more than one flow opening. Neither Fischer nor Tramm shows or describes a single flow opening, as recited in claims 24, 47, and 48. Because the references fail to teach or suggest all of the claimed features, including the single flow opening recited in claims 24, 47, and 48, these claims are patentable over Fischer in view of Tramm for at least this reason.

Moreover, one of ordinary skill in the art would not have modified either deflector of Fischer or Tramm because such modification could render the sprinkler of either Fischer or Tramm unsuitable for its intended purpose. Fischer states that a deflector plate 38 has two rectangular slots 77 and an aperture 79 to distribute water flow. Tramm, on the other hand, provides four openings 54, 55, 56, and 57 symmetrical about the centerline of Tramm in order to form three vertical support members 42, 44, and 45 that comply with a specified regulatory standard described in Tramm. Neither Fischer nor Tramm teaches or suggests modifying the face portion of the deflector of Fischer or Tramm to provide for a face portion consisting of a single flow opening, as such modification could render either of Fischer or Tramm unable to distribute water or comply with the regulatory standard. Accordingly, claims 24, 47, and 48 are patentable over Fischer in view of Tramm for at least this reason.

Thus, the claims are allowable because there is no motivation or suggestion to combine the relied-upon references, and all of the claimed features, including structural and functional features are not taught or suggested by Fischer in view of Tramm. Accordingly, applicants respectfully request the withdrawal of the rejections and prompt allowance of all claims.

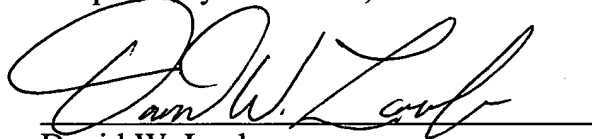
**CONCLUSION**

In view of the foregoing amendments and remarks, reconsideration of the application and timely allowance of claims 1-11, 14, 15, 20-54, 62 and 63 is respectfully requested.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the undersigned to expedite prosecution of the application.

**EXCEPT** for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 08-1641. **This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).**

Respectfully submitted,



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